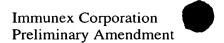


- --48. An isolated nucleic acid molecule comprising a polynucleotide selected from the group consisting of:
 - (a) a nucleic acid molecule having the sequence of SEQ ID NO:1;
- (b) a nucleic acid molecule encφding an amino acid sequence comprising the -sequence of SEQ ID NO:2;
- (c) a nucleic acid molecule that hybridizes to either strand of a denatured, double-stranded DNA comprising the nucleic acid sequence of (a) or (b) under conditions of moderate stringency in 50% formamide and 6XSSC, at 42°C with washing conditions of 60°C, 0.5XSSC, 0.1% SDS, wherein said nucleic acid sequence encodes an amino acid sequence having at least 80% identity with SEQ ID NO:2; and
- (d) a fragment of any one sequence of (a)-(c) comprising at least 25 contiguous nucleotides.
- 49. An isolated nucleic acid molecule comprising a polynucleotide that encodes a polypeptide having an amino acid sequence selected from the group consisting of:
 - (a) amino acids 22-221 of SEQ ID NO:2;
 - (b) amino acids 1-22/1 of SEQ ID NO:2;
 - (c) amino acids 246-365 of SEQ ID NO:2;
 - (d) amino acids 19-22-1 of SEQ ID NO:2;
- (e) amino acids x of SEQ ID NO:2, wherein x is an integer selected from the group consisting of 19 through 22, inclusive, and y is an integer selected from the group consisting of 221 through 224, inclusive;
 - (f) SEQ ID NO:/7; and
 - (g) SEQ ID NO:8.
- 50. A recombinant vector that directs the expression of the nucleic acid molecule of claim 48 or claim 49.
- 51. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:
 - (a) an amino acid sequence encoded by a nucleic acid molecule of claim 1;
 - (b) amino acids 22-221 of SEQ ID NO:2;
 - (c) amino acids 1-221 of SEQ ID NO:2;
 - (d) amino acids 246-365 of SEQ ID NO:2;



- (e) amino acids 19-221 of SEQ ID NO:2;
- (f) amino acids x-y of SEQ ID NO:2, wherein x is an integer selected from the group consisting of 19 through 22, inclusive, and y is an integer selected from the group consisting of 221 through 224, inclusive;
 - (g) SEQ ID NO:7; and
 - (h) SEQ ID NO:8.
- 52. An isolated antibody that binds to a polypeptide consisting of amino acids 1-365 of SEQ ID NO:2, wherein said antibody binds to an epitope other than that bound by C1.7 mAb.
- 53. The isolated antibody according to claim 52, wherein the antibody is a monoclonal antibody.
- 54. A host cell transfected or transduced with the vector of claim 50.
- 55. A method for the production of NAIL polypeptide comprising culturing a host cell that has been genetically engineered to express a human NAIL polypeptide under conditions promoting expression.
- 56. The method of claim 55, further comprising recovering the polypeptide.
- 57. The method of claim 55, wherein the host cell is a mammalian cell.
- 58. An immunogenic composition comprising a recombinant or synthetic human NAIL polypeptide and a physiologically acceptable diluent.
- 59. An isolated DNA fragment of the nucleic acid molecule of SEQ ID NO:1, wherein said fragment encodes a polypeptide that binds CD48, stimulates cell activation through CD48, or inhibits cell activation through NAIL.
- 60. A polypeptide encoded by the DNA fragment of claim 59.
- 61. An oligomer comprising at least two monomers of the polypeptide of claim 51 or claim 60.

- 62. The polypeptide of claim 51 or claim 60, fused to a heterologous polypeptide.
- 63. A method for detecting CD48 comprising exposing biological material comprising CD48 to a NAIL polypeptide and detecting complexes formed between NAIL polypeptide and CD48.
- 64. A method for chelating CD48 comprising exposing biological material comprising CD48 to a soluble NAIL polypeptide, whereby CD48 is chelated.
- 65. A method for inhibiting binding of CD48 to NAIL polypeptide on a cell surface comprising exposing a biological material comprising CD48 and a cell comprising NAIL on the cell surface to a soluble NAIL polypeptide, whereby binding of CD48 to NAIL polypeptide on the cell surface is inhibited.
- 66. A method of screening for inhibitors of the binding of CD48 to NAIL polypeptide comprising:
- (A) exposing a NAIL polypeptide to a CD48 polypeptide in the presence of a test sample;
- (B) comparing the level of complexes formed to a level formed in a control sample in the absence of said test compound, wherein a lower level of complexes in the presence of said test sample is indicative of the presence of an inhibitor in said test sample.
- 67. The method of claim 66, wherein said method is a yeast two-hybrid assay.
- 68. A method of stimulating B cells comprising exposing a B cell expressing CD48 to a soluble NAIL polypeptide, whereby said B cell is stimulated, wherein said B cell is optionally activated with IL-4, IL-10, or CD40L.
- 69. The method of claim 68, wherein an immunogen or vaccine is incubated with said cell.
- 70. A method for stimulating NK cells or cytotoxic T cells comprising exposing an NK cell expressing NAIL polypeptide or a cytotoxic T cell expressing NAIL polypeptide to soluble CD48 polypeptide, whereby said cell is stimulated.